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AIR EMISSION SOURCE
CLASS I OPERATING PERMIT

Source ID No.:	2090194
Initial Date:	January 1, 2005
Renewal Dates:	June 29, 2011 MONTH XX, 2019
Expiration Date:	MONTH XX, 2024
Source Name:	Stericycle, Inc.
SIC Code:	4953 – Refuse Systems
NAICS Code:	562213 – Solid Waste Combustors and Incinerators
Source Location:	3140 North 7th Street Trafficway Kansas City, Kansas 66115
Mailing Address:	Same as above

I. Authority

This permit, developed in accordance with the provisions of K.A.R. 28-19-500 et seq., "Operating Permit," meets the requirements of K.A.R. 28-19-510 et seq., "Class I Operating Permits" and Title V of the federal Clean Air Act.

II. Permit Intent

The purpose of this Class I Air Operating Permit is to identify the emission sources and types of regulated air pollutants emitted from the facility, the emission limitations, standards and requirements applicable to each source, and the monitoring, recordkeeping and reporting requirements applicable to each source as of the effective date of this permit. At the time of permit issuance, this facility required a Class I operating permit because it has a large Hospital/Medical/Infectious Waste Incinerator (HMIWI) as defined in 40 CFR 62.14490 and regulated by 40 CFR Part 60, Subpart Ce, currently implemented via 40 CFR Part 62, Subpart HHH. Because K.A.R. 28-19-729 was not updated to the amended EPA Emission Guidelines of October 6, 2009, the state of Kansas is now subject to the Federal Implementation Plan (FIP), 40 CFR 62, Subpart HHH published in the Federal Register May 13, 2013. The FIP is applicable to those incinerators built before June 20, 1996, and closely mirrors the amended NSPS Subpart Ec.

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III. Facility Description

Stericycle, Inc. owns and operates a hospital/medical/infectious waste incinerator (HMIWI) located at 3140 North 7th Street Trafficway, Kansas City, Kansas. This facility consists of an incinerator that sterilizes regulated medical waste. Ancillary operations at the facility include a cooling tower, emergency generator, tub washer heated by two burners, five (5) area heaters, and an office water heater.

Air emissions at the facility are hazardous air pollutants (HAPs), particulate matter with aerodynamic diameter equal to or less than 10 microns (PM_{10}), Hydrochloric Acid (HCl), lead (Pb), cadmium (Cd), mercury (Hg), total dioxins/furans, nitrogen oxides (NO_X), sulfur oxides (SO_X), and carbon monoxide (CO) emitted from the incineration process. The source is not major for any of these pollutants, but a HMIWI is a non-major source that is required to obtain a Class I Operating Permit. The source has accepted permit limits on particulate HAPs, PM_{10}, HCl, and Pb to keep these emissions below thresholds set by 40 CFR Part 62 Subpart HHH. Control equipment at the facility includes one (1) spray tower, one (1) condensing absorber, one (1) venturi scrubber with mist eliminator, one (1) induced draft fan, one (1) carbon bed, and one (1) selective non-catalytic reduction system.

IV. Emission Source Information

Emission Source ID No.	Emission Source Description	Stack/Vent ID	Control Equipment ID No.	Control Equipment Description	Applicable Regulations	Applicable Requirement Section(s)
EU-01	Simonds Model AF, Type 5C pathological incinerator; natural gas fired	SV-01 SV-02	CE-01 CE-02 CE-03 CE-04 CE-05 CE-06	Quench System, pre and final Absorber with spray tower Venturi scrubber with mist eliminator Induced draft fan Carbon bed Selective Non-Catalytic Reduction System	40 CFR 60, Subpart Ce; 40 CFR Part 62, Subpart HHH; K.A.R. 28-19-501(d); K.A.R. 28-19-650(b); various permit conditions	A
IA-01	Cooling tower	SV-COOL03	NONE	NONE	K.A.R. 28-19-650(b)	NONE
IA-04	Tubwasher, 125-gallon, heated by two burners (4.0 MMBtu/hr and 6.0 MMBtu/hr), natural gas fired	SV-WASH06	NONE	NONE	K.A.R. 28-19-30 through 32; K.A.R. 28-19-650(b)	B
IA-05A	Heater, natural gas fired, 125,000 Btu/hr	SV-HEAT05A	NONE	NONE	K.A.R. 28-19-30 through 32	B
IA-05B	Heater, natural gas fired, 125,000 Btu/hr	SV-HEAT05B	NONE	NONE	K.A.R. 28-19-30 through 32	B
IA-05C	Heater, natural gas fired, 125,000 Btu/hr	SV-HEAT05C	NONE	NONE	K.A.R. 28-19-30 through 32	B
IA-05D	Heater, natural gas fired, 125,000 Btu/hr	SV-HEAT05D	NONE	NONE	K.A.R. 28-19-30 through 32	B
IA-05E	Heater, natural gas fired, 125,000 Btu/hr	SV-HEAT05E	NONE	NONE	K.A.R. 28-19-30 through 32	B
IA-06	Water heater, 230-gallon capacity, natural gas fired, 75,000 Btu/hr	SV-HEAT06	NONE	NONE	K.A.R. 28-19-30 through 32	B

Emission Source ID No.	Emission Source Description	Stack/Vent ID	Control Equipment ID No.	Control Equipment Description	Applicable Regulations	Applicable Requirement Section(s)
EU-07	Emergency Generator, 300 kW (~402 HP), diesel fired	SV-GEN04	NONE	NONE	40 CFR Part 60, Subpart IIII; 40 CFR Part 63, Subpart ZZZZ; K.A.R. 28-19-650(b)	C

V. Summary of Applicable Requirements

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VI. Applicable Requirements

A. The following emission source is subject to the requirements listed below:

Emission Source ID No.	Emission Source Description
EU-01 / CE-01, CE-02, CE-03, CE-04, CE-05, CE-06 / SV-01, SV-02	Incinerator, natural gas fired

1. Limitation or Standard

a. Opacity of visible emissions shall not exceed 6% (except as provided in K.A.R. 28-19-11) during a six-minute block average, measured as specified in 40 CFR 62.14451. [40 CFR 62.14412(a)]

b. The facility must not discharge into the atmosphere visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) in excess of 5 percent of the observation period (*i.e.*, 9 minutes per 3-hour period), as determined by EPA Reference Method 22 of 40 CFR part 60, appendix A-7, except as provided in 40 CFR 62.14412(b)(1) and (b)(2). [40 CFR 62.14412(b)]

i. The emissions limit specified in 40 CFR 62.14412(b) does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emissions limit does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems. [40 CFR 62.14412(b)(1)]

ii. The provisions specified in 40 CFR 62.14412(b) do not apply during maintenance and repair of ash conveying systems. Maintenance and/or repair must not exceed 10 operating days per calendar quarter unless you obtain written approval from the DAQ establishing a date when all necessary maintenance and repairs of ash conveying systems are to be completed. [40 CFR 62.14412(b)(2)]

Performance Testing

All performance tests shall consist of a minimum of three test runs as per 40 CFR 62.14452(a), conducted under representative operating conditions. The minimum sample time shall be one (1) hour per test run unless otherwise indicated. [40 CFR 62.14452(b)] The use of the bypass stack during a performance test shall invalidate the performance test. [40 CFR 62.14452(r)]

EPA Reference Method 9 from Appendix A-4 of 40 CFR 60 shall be used to measure stack opacity. You may use bag leak detection systems, as specified in 40 CFR 62.14454(e), or PM CEMS, as specified in 40 CFR 62.14452(o), as an alternative to demonstrate compliance with the opacity requirements. [40 CFR 62.14452(i)]

An annual performance test (no more than 12 months following the previous performance test) using EPA Reference Method 9 from Appendix A-4 of 40 CFR 60 shall be conducted to show compliance with the opacity limit. [40 CFR 62.14451(b)(1)]

Monitoring

Periodic monitoring shall be as provided in **Section IX. Opacity Limitations and Monitoring** of the permit.

Recordkeeping and Reporting

Recordkeeping and reporting shall be as provided in **Section IX. Opacity Limitations and Monitoring** of the permit.

2. Limitation or Standard

Emissions shall not exceed the limits established in the Table 1 to 40 CFR 62 Subpart HHH, measured as specified in 40 CFR 62.14451. These emission limits shall apply at all times. [40 CFR 62.14413]

Incinerator shall not operate during incinerator malfunctions or during periods of excess opacity.

Table 1 to Subpart HHH of 40 CFR Part 62 – Emission Limits for Large HMIWI

Pollutant	Emission Limits (7% oxygen, dry basis)[1]
Particulate Matter (PM)	25 milligrams per dry standard cubic meter (mg/dscm)
Carbon Monoxide (CO)	11 parts per million by volume (ppmv)
Dioxins/furans	9.3 nanograms per dscm total dioxins/furans, or 0.054 nanograms per dscm Toxic Equivalent (TEQ)[2]
Hydrogen Chloride (HCl)	6.6 ppmv
Sulfur Dioxide (SO_2)	9.0 ppmv
Nitrogen Oxides (NOx)	140 ppmv
Lead (Pb)	0.036 mg/dscm
Cadmium (Cd)	0.0092 mg/dscm
Mercury (Hg)	0.018 mg/dscm

[1] Averaging time and compliance method for each emission limit are indicated in Table 1 to 40 CFR 62 Subpart HHH.
[2] TEQ is the 2,3,7,8- TCDD toxic equivalent determined using international toxic equivalency factors.

Performance Testing

Stericycle shall determine compliance with the PM, CO, and HCl emission limits by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods listed in 40 CFR 62.14452. If all three performance tests over a 3-year period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for the next 2 years. At a minimum, the

owner or operator must conduct a performance test for PM, CO, and HCl every third year (no more than 36 months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), you may forego a performance test for that pollutant for an additional 2 years. If any performance test indicates noncompliance with the respective emission limit, you must conduct a performance test for that pollutant annually until all annual performance tests over a 3-year period indicate compliance with the emission limit. [40 CFR 62.14451(b)(2)]

All performance tests for Dioxin/Furan, Pb, Cd, and Hg shall be conducted at least once every six years.

All performance tests for Dioxin/Furan, Pb, Cd, Hg, SO_2, and NOx must be conducted using the test methods and procedures outlined in 40 CFR 62.14452. [40 CFR 62.14451(a)]

All performance tests shall consist of a minimum of three test runs conducted under representative operating conditions. [40 CFR 62.14452(a)] The minimum sample time shall be 1 hour per test run unless otherwise indicated. [40 CFR 62.14452(b)] The use of the bypass stack during a performance test shall invalidate the performance test. [40 CFR 62.14452(r)]

The following methods shall be used during the performance tests:

a. EPA Reference Method 1 from Appendix A-1 of 40 CFR 60 shall be used to select the sampling location and number of traverse points. [40 CFR 62.14452(c)]

b. EPA Reference Method 3, 3A, or 3B from Appendix A-2 of 40 CFR 60 shall be used for gas composition analysis, including measurement of oxygen concentration. EPA Reference Method 3, 3A, or 3B from Appendix A-2 of 40 CFR 60 shall be used simultaneously with each reference method. [40 CFR 62.14452(d)]

c. The pollutant concentrations shall be adjusted to 7 percent oxygen using the equation in 40 CFR 62.14452(e). [40 CFR 62.14452(e)]

d. EPA Reference Method 5 from Appendix A-3 of 40 CFR 60 or Method 26A, or 29 from Appendix A-8 of 40 CFR 60 shall be used to measure PM emissions. [40 CFR 62.14452(f)]

e. EPA Reference Method 6 or 6C from Appendix A-4 of 40 CFR 60 shall be used to measure SO_2 emissions. [40 CFR 62.14452(g)]

f. EPA Reference Method 7 or 7E from Appendix A-4 of 40 CFR 60 shall be used to measure NO_X emissions. [40 CFR 62.14452(h)]

g. EPA Reference Method 10 or 10B from Appendix A-4 of 40 CFR 60 shall be used to measure CO emissions. [40 CFR 62.14452(j)] The owner or operator may substitute the use of a CO CEMS for the CO annual performance test and minimum secondary chamber temperature to demonstrate compliance with the CO emissions limit. [40 CFR 62.14452(o)(4)]

h. EPA Reference Method 23 from Appendix A-7 of 40 CFR 60 shall be used to measure dioxin/furan emissions. The minimum sample time shall be 4 hours per test run. The procedures outlined in 40 40 CFR 62.14452(k)(1-3) shall be used to determine compliance with toxic equivalency (TEQ) standards. [40 CFR 62.14452(k)]

i. EPA Reference Method 26 or 26A from Appendix A-8 of 40 CFR 60 shall be used to measure HCl emissions. [40 CFR 62.14452(l)]

j. EPA Reference Method 29 from Appendix A-8 of 40 CFR 60 shall be used to measure Pb, Cd and Hg emissions. [40 CFR 62.14452(m)]

Monitoring

During performance tests, the appropriate maximum and minimum operating parameters for each control system shall be established, as site specific operating parameters to determine compliance with the emission limits. [40 CFR 62.14453(a)(1)] Performance tests may be repeated at any time to establish new values for the operating parameters. The DAQ and/or KDHE may request a repeat performance test at any time. [40 CFR 62.14451(d)] These operating parameters shall include:

a. maximum charge rate shall be measured once per charge and recorded once per charge;

b. maximum flue gas temperature shall be measured continuously and recorded every minute;

c. minimum secondary chamber temperature shall be measured continuously and recorded every minute;

d. minimum pressure drop across the wet scrubber (CE-03) shall be measured continuously and recorded every minute;

e. minimum scrubber liquor flow rate shall be measured continuously and recorded every minute (measured to CE-03); and

f. minimum scrubber liquor pH shall be measured continuously and recorded every minute.

g. minimum reagent flow rate shall be measured hourly and recorded

every hour (measured to CE-06)
[40 CFR 62 Subpart HHH - Table 3]

Stericycle shall not operate above any of the applicable maximum operating parameters or below any of the applicable minimum operating parameters listed in this limitation, (Limitation #2, Monitoring section, items a. to g.) as established in the most recently approved performance test report, and measured as 3-hour rolling averages (calculated each hour as the average of the previous 3 operating hours) at all times except during performance tests. [40 CFR 62.14453(a)(2)]

Operation above the established maximum or below the established minimum operating parameter(s) shall constitute a violation of established operating parameter(s). Operating parameter limits do not apply during performance tests. [40 CFR 62.14455(a)]

A repeat performance test may be conducted within 30 days of violation of applicable operating parameter(s) to demonstrate that the affected facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to 40 CFR 62.14455(g) shall be conducted using the identical operating parameters that indicated a violation under the following conditions: [40 CFR 62.14455(g)]

a. operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the CO emission limit; [40 CFR 62.14455(d)(1)]

b. operation of the affected facility above the maximum charge rate and below the minimum pressure drop across the wet scrubber (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the PM emission limit; [40 CFR 62.14455(d)(2)]

c. operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature, and below the minimum scrubber liquor flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit; [40 CFR 62.14455(d)(3)]

d. operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a 3- hour rolling average) simultaneously shall constitute a violation of the HCl emission limit; [40 CFR 62.14455(d)(4)]

e. operation of the affected facility above the maximum flue gas temperature and above the maximum charge rate (each measured on a 3- hour rolling average) simultaneously shall constitute a

violation of the Hg emission limit; [40 CFR 62.14455(d)(5)]

f. use of the bypass stack shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits; and [40 CFR 62.14455(d)(6)]

g. operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature, and below the minimum reagent flow rate simultaneously shall constitute a violation of the NOx emission limit. [40 CFR 62.14455(f)]

Recordkeeping and Reporting

Records shall be kept of the results of the initial, annual and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters. [40 CFR 62.14460(f)] Records shall be kept of the operating parameters during operation as detailed in 40 CFR 62.14460(a) and (b) and 40 CFR 62.14463(a). These records shall be kept on site and available for inspection for a period of five years from date of record. [40 CFR 62.14461]

A written log shall be maintained of all scrubber control system bypasses and/or malfunctions, including date, time and duration. The DAQ shall be notified immediately whenever the scrubber is being bypassed. In addition, a written malfunction report shall be submitted to DAQ within ten (10) calendar days of any significant malfunction or upset condition of the scrubber or the incinerator that may have resulted in excessive emissions. A written log shall be maintained of all maintenance on the incinerator, including date and details of repair. These records shall be kept on site and available for inspection for a period of five years from date of record. [40 CFR 62.14460(d) and (e); [40 CFR 62.14461; & July 5, 1990 letter to source]

After the effective date of this permit, reports shall be submitted semi-annually, no more than 6 calendar months following the previous report. [40 CFR 62.14464(c)] These reports shall be signed by the facilities manager and submitted to the DAQ and KDHE.

The semi-annual report shall include the information specified below:

a. the values for the site-specific operating parameters established as listed in Limitation #2, Monitoring section; [40 CFR 62.14463(a)(2)]

b. the highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, as listed in Limitation #2, Monitoring section, and for the calendar year

preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period; [40 CFR 62.14463(a)(5) and (a)(6)]

c. the calendar dates or calendar quarters that monitoring data was not obtained (except during periods of monitoring equipment malfunction, calibration or repair); [40 CFR 62.14460(c)]

d. any information recorded under Limitation #3, Recordkeeping and Reporting section, items b. to d., for the calendar year being reported and for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period; [40 CFR 62.14463(a)(7) and (a)(8)]

e. if a performance test was conducted during the reporting period, the results of that test; [40 CFR 62.14463(a)(9)]

f. if no exceedances or malfunctions were reported under Limitation #3, Recordkeeping and Reporting section, items b. to d. for the calendar year being reported, a statement that no exceedances occurred during the reporting period;

g. any use of the bypass stack, the duration, reason for malfunction and corrective action taken; [40 CFR 62.14463(a)(11)]

h. records of the annual equipment inspections, any required maintenance and any repairs not completed within 10 days of an inspection or the time frame established by the EPA Administrator (or delegated enforcement authority); [40 CFR 62.14463(a)(12)]

i. records of the annual air pollution control device inspections, any required maintenance and any repairs not completed within 10 days of an inspection or the time frame established by the EPA Administrator (or delegated enforcement authority); and [40 CFR 62.14463(a)(13)]

j. concentrations of CO, PM, HCl, Pb, Cd, Hg and dioxin/furan, as applicable, as determined by the CEMS or continuous automated sampling system, as applicable. [40 CFR 62.14463(a)(14)]

3. Limitation or Standard

Devices for monitoring the applicable maximum and minimum operating parameters established in the performance tests shall be installed, calibrated (to manufacturers' specifications), maintained and operated. A device to measure the use of the bypass stack, including date, time, and duration, shall be installed, calibrated (to manufacturers' specifications), maintained, and operated. Alternate methods by which to monitor these parameters must be pre-approved by the DAQ and KDHE. [40 CFR

62.14454(a) and (b)]

Monitoring

The following parameters must be monitored as listed below. Compliance shall be determined based on a 3-hour rolling average:

a. maximum charge rate shall be measured once per charge and recorded once per charge;

b. maximum flue gas temperature shall be measured continuously and recorded every minute;

c. minimum secondary chamber temperature shall be measured continuously and recorded every minute;

d. minimum pressure drop across the wet scrubber shall be measured continuously and recorded every minute

e. minimum scrubber liquor flow rate shall be measured continuously and recorded every minute;

f. minimum scrubber liquor pH shall be measured continuously and recorded every minute; and

g. minimum reagent flow rate shall be measured hourly and recorded every hour.

[40 CFR 62 Subpart HHH - Table 3]

Monitoring data shall be obtained at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste. [40 CFR 62.14454(d)]

The following calibration frequencies shall be maintained:

a. scale used to measure charge rate shall be calibrated quarterly;

b. thermocouple used to measure flue gas temperature shall be calibrated annually;

c. each thermocouple used to measure chamber temperature (primary and secondary) shall be calibrated annually;

d. differential pressure gauge used to measure pressure drop across the wet scrubber shall be calibrated every two (2) years;

e. each flowmeter used to measure scrubber liquor flow rate (absorber and venturi) shall be calibrated every three (3) years; and

f. pH probe used to measure scrubber liquor pH shall be calibrated weekly.

The device used to monitor bypass stack cap position shall be installed such that failure of the device would indicate the bypass stack cap was open. Upon visual confirmation that the bypass stack cap is actually closed, indicating that the device has failed, the device shall be repaired or replaced.

Modifications to the type of instrument used or to the calibration frequencies shall require written pre-approval from DAQ.

Recordkeeping and Reporting

Records of the following information (as applicable) shall be maintained onsite, in either paper copy or computer-readable format, for a period of at least 5 years from the date of record: [40 CFR 62.14460 and 40 CFR 62.14462]

a. calendar dated record of:

i. concentration of any pollutant listed in Table 1, measurements of opacity and visible ash; [40 CFR 62.14460(b)(1)]

ii. HMIWI charge dates, times, and weights and hourly charge rates; [40 CFR 62.14460(b)(2)]

iii. amount and type of dioxin/furan sorbent used during each hour of operation, as applicable; [40 CFR 62.14460(b)(4)]

iv. amount and type of Hg sorbent sed during each hour of operation, as applicable; [40 CFR 62.14460(b)(5)]

v. amount of HCl sorbent used during each hour of operation, as applicable; [40 CFR 62.14460(b)(6)]

vi. amount and type of NOx reagent used during each hour or operation, as applicable; [40 CFR 62.14460(b)(7)]

vii. secondary chamber temperatures recorded during each minute of operation; [40 CFR 62.14460(b)(8)]

viii. liquor flow rate to the wet scrubber inlet during each minute of operation; [40 CFR 62.14460(b)(9)]

ix. horsepower or amperage to the wet scrubber during each minute of operation; [40 CFR 62.14460(b)(10)]

x. pressure drop across the wet scrubber system during each minute of operation; [40 CFR 62.14460(b)(11)]

xi. temperature at the outlet from the wet scrubber during each minute of operation (maximum flue gas temperature); [40 CFR 62.14460(b)(12)]

xii. pH at the inlet to the wet scrubber during each minute of operation; [40 CFR 62.14460(b)(13)]

xiii. annual equipment inspections, any required maintenance, and any repairs not completed within 10 operating days of an inspection or the time frame established by the EPA Administrator or delegated enforcement authority; [40 CFR 62.14460(b)(14)]

xiv. all operating parameter data collected, if you are complying by monitoring site-specific operating parameters under 40 CFR 62.14453(b); [40 CFR 62.14460(b)(16)]

xv. concentrations of CO, PM, HCl, Pb, Cd, Hg and dioxin/furan, as applicable, as determined by the CEMS or continuous automated sampling system, as applicable; [40 CFR 62.14460(b)(17)]

xvi. annual air pollution control device inspections, any required maintenance and any repairs not completed within 10 days of an inspection or the timeframe established by the Administrator; and [40 CFR 62.14460(b)(18)]

xvii. Bypass stack use including date, time and duration. [40 CFR 62.14460(b)(15)]

b. identification of calendar days for which data on emission rates or operating parameters listed above in Limitation #3 Recordkeeping and Reporting section, item a. have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data and a description of corrective actions taken; [40 CFR 62.14460(c)]

c. identification of calendar days, times and durations of malfunctions, a description of the malfunction and the corrective action taken; [40 CFR 62.14460(d)]

d. identification of calendar days for which data on emission rates or operating parameters listed above in a) exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances and a description of corrective actions taken; and [40

CFR 62.14460(e)]

e. records of calibration and repairs of any monitoring devices as required in the Limitation #3, Monitoring section of this permit. [40 CFR 62.14460(j)]

4. Limitation or Standard

A waste management plan shall be prepared to identify both the feasibility of, and the approach for, separating certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste. The waste management plan developed by the owner or operator may address, but is not limited to, elements such as segregation and recycling of paper, cardboard, plastics, glass, batteries, food waste and metals (*e.g.*, aluminum cans, metals-containing devices); segregation of non-recyclable wastes (*e.g.*, polychlorinated biphenyl-containing waste, pharmaceutical waste, and mercury-containing waste such as dental waste); and purchasing recycled or recyclable products. The waste management plan may include different goals or approaches for different areas or departments of the facility and need not include new waste management goals for every waste stream. When the owner or operator develop the waste management plan, it should identify, where possible, reasonably available additional waste management measures, taking into account the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other potential environmental or energy impacts they might have. In developing the waste management plan, the owner or operator must consider the American Hospital Association (AHA) publication titled "Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities." [40 CFR 62.14431(a)]

Recordkeeping and Reporting

The owner or operator must submit the waste management plan with the initial report, which is due 60 days after demonstrating initial compliance with the amended emissions limits, by conducting an initial performance test or submitting the results of previous emissions tests, provided the conditions in 40 CFR 62.14451(e) are met. These records shall be kept on site and available for inspection for a period of five years from the date of record. [40 CFR 62.14432]

5. Limitation or Standard

The HMIWI shall be operated only by a fully trained and qualified HMIWI operator, either at your facility or able to be at your facility within one hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one or more HMIWI operators. [40 CFR 62.14420]

Monitoring

HMIWI operator training shall be obtained by completing an HMIWI operator training course that includes, at a minimum, twenty-four hours of training on the following elements: [40 CFR 60.14422(a)]

a. environmental concerns, including pathogen destruction and types of emissions; [40 CFR 60.14422(a)(1)]

b. basic combustion principles, including products of combustion; [40 CFR 60.14422(a)(2)]

c. operation of the type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures; [40 CFR 60.14422(a)(3)]

d. combustion controls and monitoring; [40 CFR 60.14422(a)(4)]

e. operation of air pollution control equipment and factors affecting performance, if applicable; [40 CFR 60.14422(a)(5)]

f. methods to monitor pollutants, including continuous emission monitoring systems and monitoring of HMIWI and air pollution control device operating parameters, and equipment calibration procedures, where applicable; [40 CFR 60.14422(a)(6)]

g. inspection and maintenance of the HMIWI, air pollution control devices, and continuous emission monitoring systems; [40 CFR 60.14422(a)(7)]

h. actions to correct malfunctions or conditions that may lead to malfunctions; [40 CFR 60.14422(a)(8)]

i. bottom and fly ash characteristics and handling procedures; [40 CFR 60.14422(a)(9)]

j. applicable federal, state, and local regulations; [40 CFR 60.14422(a)(10)]

k. work safety procedures; [40 CFR 60.14422(a)(11)]

l. pre-startup inspections; [40 CFR 60.14422(a)(12)]

m. record keeping requirements; and [40 CFR 60.14422(a)(13)]

n. training in waste segregation according to 40 CFR 60.14430(c). [40 CFR 60.14422(a)(15)]

The training course shall include reference material distributed to the attendees covering the course topics. An examination shall be designed and administered by the instructor of the training course. [40 CFR 62.14422(b) and (c)]

HMIWI operator qualification shall be obtained by completion of a training course that satisfies the above listed criteria, and either six (6) months of experience as an HMIWI operator, six (6) months of experience as a direct supervisor of an HMIWI operator, or completion of at least two (2) burn cycles under the observation of a qualified HMIWI operator. HMIWI operator qualification shall be valid from the date on which the examination is passed or the completion of the required experience, whichever is later. [40 CFR 62.14423(a) and (b)]

To maintain operator qualification, the trained and qualified HMIWI operator must complete and pass an annual review or refresher course covering the following: [40 CFR 62.14423(c)]

a. update of regulations; [40 CFR 62.14423(c)(1)]

b. incinerator operation, including startup and shutdown procedures; [40 CFR 62.14423(c)(2)]

c. inspection and maintenance; [40 CFR 62.14423(c)(3)]

d. responses to malfunctions or conditions that may lead to malfunction; and [40 CFR 62.14423(c)(4)]

e. discussion of operating problems encountered by attendees. [40 CFR 62.14423(c)(5)]

This course shall last a minimum of four (4) hours. [40 CFR 62.14423(c)]

If the operator's qualification lapses, he or she must renew it by one of the following methods: [40 CFR 62.14423(d)]

a. For a lapse of less than three (3) years, complete and pass a standard annual refresher course described in 40 CFR 62.14423(c); [40 CFR 62.14423(d)(1)]

b. For a lapse of three (3) years or more, complete and pass a training course with the minimum criteria described in 40 CFR 62.14422. [40 CFR 62.14423(d)(2)]

Recordkeeping and Reporting

Records shall be maintained on site, in either paper copy or computer-readable format, the following information, as applicable, for a period of at least 5 years from date of record:

a. the names of HMIWI operators who have completed review of the documentation in 40 CFR 62.14424 as required by 40 CFR 62.14425, including the date of the initial review and all subsequent annual reviews; [40 CFR 62.14460(g)]

b. the names of HMIWI operators who have completed operator training requirements, including documentation of training and all the dates of training; and [40 CFR 62.14460(h)]

c. the names of the HMIWI operators who have met the criteria for qualification under 40 CFR 62.14423 and the dates of their qualification. [40 CFR 62.14460(i)]

6. Limitation or Standard

Documentation shall be maintained at the facility that addresses the following: [40 CFR 62.14424(a)]

a. summary of the applicable standards under 40 CFR 62 Subpart HHH; [40 CFR 62.14424(a)(1)]

b. description of basic combustion theory applicable to HMIWI; [40 CFR 62.14424(a)(2)]

c. procedures for receiving, handling, and charging waste; [40 CFR 62.14424(a)(3)]

d. HMIWI startup, shutdown and malfunction procedures; [40 CFR 62.14424(a)(4)]

e. procedures for maintaining proper combustion air supply levels; [40 CFR 62.14424(a)(5)]

f. procedures for operating the HMIWI and associated air pollution control systems within the standards established in 40 CFR 62 Subpart HHH; [40 CFR 62.14424(a)(6)]

g. procedures for responding to malfunction or conditions that may lead to malfunction; [40 CFR 62.14424(a)(7)]

h. procedures for monitoring HMIWI emissions; [40 CFR 62.14424(a)(8)]

i. reporting and recordkeeping procedures; and [40 CFR 62.14424(a)(9)]

j. procedures for handling ash. [40 CFR 62.14424(a)(10)]

This documentation shall be reviewed annually with each HMIWI operator. [40 CFR 62.14425(c)]

Recordkeeping and Reporting

Records shall be maintained of the annual review of this documentation with each HMIWI operator, including names of operators trained, date of initial review, and dates of all subsequent reviews. These records shall be kept on site, in a readily accessible location for all HMIWI operators, and available for inspection for a period of five years from date of record. [40 CFR 62.14424(b); 40 CFR 62.14460(g) to (i)]

7. Limitation or Standard

The control equipment shall be continuously operated while operating the emission unit. [K.A.R. 28-19-501(d)(1)]

Monitoring

A written air pollution control equipment maintenance plan shall be developed, implemented, and maintained on-site within 180 days of permit issuance to assure proper operation of the air pollution control equipment. [K.A.R. 28-19-501(d)(2)] This requirement shall apply to the quench system (CE-01), absorber with spray tower (CE-02), venturi scrubber with mist eliminator (CE-03), induced draft fan (CE-04), carbon bed (CE-05), selective non-catalytic reduction system (CE-06), pH monitor and pH alarm. [June 6, 2012 Construction Permit]

Recordkeeping and Reporting

The owner or operator shall maintain a log showing the date of all routine or other maintenance or repairs of the control equipment, the action taken on such date, and any corrective action or preventative measures taken. These records shall be kept on site and available for inspection for a period of five years from date of record. [K.A.R. 28-19-501(d)(3)]

8. Limitation or Standard

The emission unit shall be operated within the following operating limits, at all times except during periods of startup, shutdown, and malfunction, provided that no hospital waste or medical/infectious waste is charged to the emission unit during startup, shutdown, or malfunction:

a. the maximum charge rate shall not exceed 1500 lbs/hour. The maximum daily charge shall not exceed 18 tons of waste; [December 6, 1988 addendum to Permit]

b. the minimum primary chamber temperature shall be 1400º F. No

new waste shall be charged if the primary chamber temperature drops below this minimum limit; [July 30, 1987 Construction Permit]

c. the minimum secondary chamber temperature shall be 1800º F. This minimum temperature must be established prior to initial charging of waste. No new waste shall be charged if the secondary chamber temperature drops below this minimum limit; [July 30, 1987 Construction Permit]

d. the minimum residence time in the secondary chamber shall be 2 seconds; and [July 30, 1987 Construction Permit]

e. the absorber solution pH shall be greater than 3.0. No new waste shall be charged if the absorber solution pH drops below 3.0. [January 20, 1998 amendment to May 14, 1997 Operating Permit]

Monitoring

The charge rate shall be measured continuously and recorded hourly. The primary and secondary chamber temperatures shall be monitored continuously. The secondary chamber temperature shall be recorded every minute. The minimum residence time in the secondary chamber shall be demonstrated using manufacturer's data or guideline procedure. An alarm shall be installed to alert operators when the pH of the absorber solution drops below 3.0. The absorber solution pH shall be monitored continuously and recorded every minute. The alarm for the absorber solution pH shall be maintained and tested per the manufacturing guidelines. [December 16, 1988 Additional Requirements to Permit; October 21, 2002 revisions to Construction Approval]

Recordkeeping and Reporting

The charge rate shall be recorded hourly. The secondary chamber temperature shall be recorded every minute. The absorber solution pH shall be recorded every minute. Records shall be kept of the feed rate, the absorber solution pH and of the maintenance/testing of the pH alarm. Notification is not required if the absorber solution pH drops below 3.0. All records shall be kept on site and available for inspection for a period of five years from date of record. [December 6, 1988 addendum to Permit]

9. Limitation or Standard

The owner or operator is authorized to combust:

a. Hospital waste and medical/infectious waste as defined in 40 CFR Part 62, Subpart HHH. [40 CFR 62.14490];

b. Regulated/International Garbage (UDSA/APHIS) defined as waste

material derived in whole or in part from fruits, vegetables, meats, or other plant or animal material, and other refuse of any character whatsoever that has been associated with any such material aboard any means of conveyance and includes food scraps, table refuse, galley refuse, food wrappers, or packaging materials, and other waste material from stores, food preparation areas, passengers' or crews' quarters, dining rooms, or any other areas on vessels, aircraft, or other means of conveyance;

c. Confidential or secure records requiring assured destruction;

d. Seized and controlled substances;

e. Expired medical products or devices;

f. Non-hazardous trace chemotherapeutic waste materials;

g. Non-hazardous pharmaceuticals; and

h. Other material or waste allowed by state or federal regulation not included in items a. through g. above.

The emissions unit is prohibited from incinerating waste contaminated with radionuclides, specifically including waste classified as low level radioactive waste. [July 30, 1987 Construction Permit]

Monitoring

A device to monitor waste for radioactivity shall be installed prior to waste charge to the incinerator. This device shall be maintained according to the manufacturer's guidelines and calibrated annually.

Recordkeeping and Reporting

The owner or operator shall maintain a log showing the date of all calibration, routine or other maintenance or repairs of the detector, the action taken on such date, and any corrective action or preventative measures taken. These records shall be kept on site and available for inspection for a period of five years from date of record.

The owner or operator shall track, on a quarterly basis, the percent by weight of all "other" fuels or waste not considered hospital waste, consistent with the current waste management plan, combusted to ensure the HMIWI does not become a co-fired combustor as defined in 40 CFR 62.14490. All records shall be kept on site and available for inspection for a period of five years from date of record.

10. Limitation or Standard

The emission unit may incinerate pharmaceuticals consisting thirty (30) percent by weight or less of the total waste stream. The source shall not incinerate more than 450 pounds of pharmaceuticals in any clock hour of operation. If the total charging rate to the incinerator drops below 1350 pounds per hour, the source must adjust the maximum charge rate of pharmaceuticals to equal or less than 30 percent of the total charging rate in that hour of operation. On a one-year average, the amount of pharmaceuticals incinerated shall not exceed 30 percent of the total waste incinerated. The source shall not incinerate pharmaceuticals which qualify as hazardous waste. *Stericycle may increase the pharmaceutical limit to fifty (50) percent by weight, 750 pounds per clock hour, or 50 percent of the total charging rate for the hour if charging drops below 1350 pounds per hour, and the one year average of pharmaceuticals incinerated shall not exceed fifty (50) percent of the total waste incinerated, providing compliance is demonstrated through an approved full performance test at the fifty (50) percent pharmaceutical level.* [June 28, 2011 Modification of Permit/Approval Conditions]

Monitoring

At a minimum, the hazardous waste screening procedure established in the January 14, 1992 letter from the source shall be maintained. [February 20, 1992 amendment regarding pharmaceutical conditions]

For the purpose of this limitation, the allowable percentage of pharmaceuticals, up to fifty (50) percent, will be determined by the most recent approved full performance test. A full performance test must include the testing of Dioxin/Furan, Pb, Cd, Hg, PM, CO, HCl, and opacity.

Recordkeeping and Reporting

The source shall maintain records of the amount of pharmaceuticals charged on an hourly basis and provide an annual summary that demonstrates compliance with the limitations stated above. These records shall be maintained on site and made available for inspection for a period of five years from date of record. [June 28, 2011 Modification of Permit/Approval Conditions]

11. Limitation or Standard

The following process interlocks shall be established:

a. the charge door must be closed at all times that the incinerator is operating except during actual charging. At no time that the incinerator be operating shall both the charge door and charging hopper door be open at the same time. [July 30, 1987 Construction Permit]

b. no waste shall be charged if the scrubber control system is bypassed or inoperative. [July 5, 1990 amendment to July 30, 1987 Construction Permit]

Recordkeeping and Reporting

The source shall maintain records that document these interlocks are established. These records shall be maintained on site and made available for inspection for a period of five years from date of record.

12. Limitation or Standard

No odors from the incinerator or any part of the associated facility may be detectable at the facility boundary such that two measurements of scentometer No. 2 odor strength are detected within a period of one hour at any place or places on or outside the facility boundary. These measurements shall be separated by at least fifteen (15) minutes. [July 30, 1987 Construction Permit]

Monitoring

At the request of the department, odor measurements shall be made with a scentometer approved by the department.

Recordkeeping and Reporting

The source shall maintain records of any odor measurements made at the site. These records shall be maintained on site and made available for inspection for a period of five years from date of record.

13. Limitation or Standard

Stericycle shall comply to the site-specific operating parameters pursuant to 40 CFR 62 Subpart HHH for periods of startup and shutdown. EPA approved Stericycle's request for a waiver of stack test requirements during the "combustion control only" stage, along with the work practice standards and the following site-specific operating parameters:

a. Stericycle will monitor that there is only use of natural gas or propane during periods of startup and shutdown when waste is not being combusted in the HMIWI.

b. Stericycle will record the type and amount of natural gas or propane used by the HMIWI.

c. Stericycle will report the type and amount of natural gas or propane used by the HMIWI for each semi-annual period.

[September 4, 2014 Letter from EPA Region 7]

B. The following emission sources are subject to the requirements listed below:

Emission Source ID No.	Emission Source Description
IA-04 / SV-WASH06	Tubwasher, 125-gallon, heated by two burners (4.0 MMBtu/hr and 6.0 MMBtu/hr), natural gas fired
IA-05A / SV-HEAT05A	Heater, natural gas fired, 125,000 Btu/hr
IA-05B / SV-HEAT05B	Heater, natural gas fired, 125,000 Btu/hr
IA-05C / SV-HEAT05C	Heater, natural gas fired, 125,000 Btu/hr
IA-05D / SV-HEAT05D	Heater, natural gas fired, 125,000 Btu/hr
IA-05E / SV-HEAT05E	Heater, natural gas fired, 125,000 Btu/hr
IA-06 / SV-HEAT06	Water heater, 230-gallon, natural gas fired, 75,000 Btu/hr

1. Limitation or Standard

Particulate matter emissions are limited to 0.60 lb/ 10^6 BTU/hr, as determined by Table H-1 for total heat input capacity of less than 10 MMBtu/hr (for IA-04, IA-05A, IA-05B, IA-05C, IA-05D, IA-05E and IA-06). [K.A.R. 28-19-31(a)]

The total heat input represents the sum of the maximum design rate heat input or designer's guaranteed heat input, whichever is greater, of all indirect heating units at a plant. [K.A.R. 28-19-30(c)]

Monitoring

Combustion of natural gas is a demonstration of compliance with this particulate matter limitation. The owner or operator shall re-evaluate the particulate emission rate limitation when either the process changes or an emission factor changes.

Recordkeeping and Reporting

Records shall be maintained of any recalculations and evaluations. These records shall include the design rate capacity of the unit, emission factors used in calculations and potential/ allowable emission rates.

2. Limitation or Standard

When operating on natural gas, opacity shall not equal or exceed 20%. [K.A.R. 28-19-31(b)(2)]

Monitoring

Periodic monitoring shall be as provided in **Section IX. Opacity Limitations and Monitoring** of this permit.

Recordkeeping and Reporting

Recordkeeping and reporting shall be as provided in **Section IX. Opacity Limitations and Monitoring** of this permit.

C. The following emission source is subject to the requirements listed below:

Emission Source ID No.	Emission Source Description
EU-07	Emergency Generator, diesel fired, 300 kW (~402 HP)

The owner or operator shall comply with the applicable sections of 40 CFR Part 60 Subpart A, *General Provisions*, as identified in Table 8 of 40 CFR Part 60 Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*. [40 CFR 60.4218]

The facility is subject to 40 CFR Part 63 Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, because the proposed engine is an affected source under 40 CFR 63.6590(a). In accordance with 40 CFR 63.6590(c), the engines must meet the requirements of 40 CFR Part 63 Subpart ZZZZ by meeting the requirements of 40 CFR Part 60 Subpart IIII. No additional requirements under 40 CFR Part 63 Subpart ZZZZ apply to the engine.

[June 6, 2012 Construction Permit]

1. Limitation or Standard

Emissions of Non-Methane Hydrocarbons and Oxides of Nitrogen shall not exceed 4.0 g/kW-hr.

Particulate Matter emissions shall not exceed 0.12 g/kW-hr.

Exhaust opacity from the engine must not exceed 20% during the acceleration mode; 15% during the lugging mode; and 50% during the peaks in either the acceleration or lugging modes.
[40 CFR 60.4205(b); 40 CFR 60.4202(a)(2); 40 CFR 89.112; 40 CFR 89.113]

Fuel Requirements

Sulfur content shall be limited to 15 parts per million (ppm).

The centane index shall not be less than 40.
[40 CFR 60.4207(b); 40 CFR 80.510(c)]

Monitoring

a. If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine. [40 CFR 60.4209(a)]

b. If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in 40 CFR Part 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 CFR 60.4209(b)]

c. If you are an owner or operator and must comply with the emission standards specified in 40 CFR 60 Subpart IIII, you must do all the following, except as permitted under paragraph (g) of 40 CFR 60.4211:

    i. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [40 CFR 60.4211(a)(1)]

    ii. Change only those emission-related settings that are permitted by the manufacturer; and [40 CFR 60.4211(a)(2)]

    iii. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to the engine. [40 CFR 60.4211(a)(3)]

d. If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in § 60.4204(b) or § 60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in § 60.4205(c), you must comply by purchasing an engine certified to the emission standards in § 60.4204(b), or § 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. [40 CFR 60.4211(c)]

<u>Recordkeeping</u>

a. If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214(b)]

b. If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. [40 CFR 60.4214(c)]

c. Owners or operators of stationary CI ICE equipped with AECDs pursuant to the requirements of 40 CFR 1039.665 must report the use of auxiliary emission control devices as required by 40 CFR 1039.665(e). [40 CFR 60.4214(e)]

VII. Opacity Summary

Emission Source ID No.	Emission Source Description	Emission Source Opacity Requirement
EU-01	Simonds Model AF, Type 5C pathological incinerator; natural gas fired	6%

All other emission units and insignificant activities are limited to less than 20% opacity. Periodic monitoring shall be conducted and the recordkeeping and reporting of the periodic monitoring will be performed and maintained as described in **Section IX. Opacity Limitations and Monitoring** of this permit.

VIII. Facility-Wide Applicable Requirements

The permittee shall comply with the following when required by the relevant regulation:

A. K.A.R. 28-19-30 through K.A.R. 28-19-32, Indirect Heating Equipment Emissions

Except as provided in K.A.R. 28-19-32, aggregated emissions of particulate matter from indirect heating equipment shall not exceed those specified in table H-1 of K.A.R. 28-19-31(a), or for equipment having intermediate heat input

between 10 MMBtu/hr and 10,000 MMBtu/hr, the allowable emission rate may be determined by the equation provided at K.A.R. 28-19-31(a).

Records shall be maintained of any recalculations and evaluations. These records shall include the design rate capacity of the unit, emission factors used in calculations and potential/allowable emission rates.

B. K.A.R. 28-19-55 through K.A.R. 28-19-58, Air Pollution Emergency Episode Plans

The permittee shall comply with the requirements of K.A.R. 28-19-55 through 28-19-58, Air Pollution Emergency Episode Plans, and shall maintain on site an emergency episode plan if the KDHE requires an emergency episode plan be developed pursuant to K.A.R. 28-19-58.

C. K.A.R. 28-19-210, Calculation of Actual Emissions

The following applies to emission control equipment not otherwise addressed in this permit:

If the owner or operator uses air emission control equipment, not otherwise addressed in this permit, to calculate actual emissions, the air emission control equipment shall be maintained in accordance with the manufacturer's recommendation. The owner or operator shall keep a written log recording the date and type of action taken when performing preventive or other maintenance on the air emission control equipment.

D. K.A.R. 28-19-517, Annual Emissions Inventory and Fees

1. Annual Emissions Inventory:

   The owner or operator shall submit all operating or relevant information to estimate emissions for the preceding year to the KDHE. This information shall be submitted on or before the date specified at K.A.R. 28-19-517 or amendments thereto.

2. Annual Emissions Fee:

   The owner or operator of a permitted emissions unit or stationary source is required to pay fees to the permitting authority consistent with the fee schedule set out in the regulations pursuant to K.A.R. 28-19-517(b).

3. Submittal:

   Each annual emissions inventory and each annual emissions fee shall be submitted on forms provided or approved by the KDHE as specified in K.A.R. 28-19-517(c). At the time of permit issuance, the due date for submittal of this information is April 1.

4. Late Fee and refund:

   Each owner or operator who fails to submit the annual emission inventory and pay the annual emissions fee by the due date specified shall pay a late fee as specified in K.A.R. 28-19-517(d) and any overpayment of $100.00 or more made by the owner or operator of a stationary source may be refunded.

E. K.A.R. 28-19-645, Open Burning

The permittee is prohibited from conducting open burning, except as allowed by K.A.R. 28-19-647 and K.A.R. 28-19-648.

F. K.A.R. 28-19-735, Which Adopts by Reference 40 CFR Part 61 Subpart A, General Provisions, and Subpart M, NESHAP for Asbestos

The permittee shall comply with the National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61, Subpart A, General Provisions, and Subpart M for Asbestos, adopted by K.A.R. 28-19-735 and K.A.R. 28-50-1 et seq., when conducting any renovation or demolition activities at the facility.

G. 40 CFR Part 68, Chemical Accident Prevention Provisions

Chemical Accident Prevention Provisions, 40 CFR Part 68, is applicable to an owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined in 40 CFR 68.115. The facility does not currently have any regulated substances that meet the requirements of 40 CFR Part 68.

If the stationary source is subject to 40 CFR Part 68, but is not required to comply with those requirements, as of the effective date of this operating permit, the stationary source shall be in compliance with the requirements of 40 CFR Part 68 no later than the latest of the following dates:

1. Three years after the date on which a regulated substance is first listed in 40 CFR 68.130; or
2. The date on which a regulated substance is first present above a threshold quantity in a process.

H. 40 CFR Part 82, Protection of Stratospheric Ozone

The permittee shall comply with 40 CFR Part 82, Protection of Stratospheric Ozone. Affected controlled substances include, but are not limited to, chlorfluorocarbons, hydrochlorofluorocarbon refrigerants, halons, carbon tetrachloride, and methyl chloroform (specific affected controlled substances are listed in 40 CFR Part 82, Subpart A, appendices A {Class I} and B {Class II}).

The following subparts and sections of 40 CFR Part 82 are conditions of this permit:

Subpart A - Production and Consumption Controls
Subpart B - Servicing of Motor Vehicle Air Conditioners
Subpart E - Labeling of Products Using Ozone-Depleting Substances: Section; 82.106 Warning statement requirements, 82.108 Placement of warning statement, 82.110 Form of label bearing warning statement, and 82.112 Removal of label bearing warning statement
Subpart F - Recycling and Emissions Reduction: Sections; 82.156 Required practices, 82.158 Standards for recycling and recovery equipment, 82.161 Technician certification, and 82.166 Reporting and recordkeeping requirements
Subpart G - Significant New Alternatives Policy Program

IX. Opacity Limitations and Monitoring

Except as otherwise provided in K.A.R. 28-19-9, K.A.R. 28-19-11, K.A.R. 28-19-650(c) or as otherwise identified in the Applicable Requirements portion of this permit, K.A.R. 28-19-650(a)(3) limits visible air emissions from each emission unit to 20%. K.A.R. 28-19-31(b)(2) limits air emissions from any indirect heating equipment to 20% or less.

Except as otherwise provided in the applicable requirements portion of this permit, emissions from the following or similar activities do not require routine periodic monitoring: emissions vented inside an enclosed building or structure, from cooling towers, and from evaporative VOC sources; and emissions from turbines, reciprocating internal combustion engines, burners in indirect heating applications, and space heaters when burning natural gas, propane/LPG, or refinery gas.

Routine periodic monitoring requirements: Except as otherwise provided in the applicable requirements portion of this permit or as provided above, the owner or operator shall perform a qualitative assessment at least once per calendar month, with at least one week between assessments. The monthly qualitative assessment shall include each activity at the facility, which is operating at the time scheduled. For each activity from which the opacity of visible emissions appears to exceed the limit, the permittee shall take appropriate action to correct process operating parameters, after which the permittee shall perform an additional qualitative assessment for that unit. If, at the end of ten operating days from the date of the possible exceedance, opacity of visible emissions appears to exceed the limit, the owner or operator shall notify the agency. Within seven days of the end of the ten operating day period, a test of visible emissions from the unit shall be scheduled. The test shall occur within 30 days of the end of the ten operating day period and shall utilize EPA Method 9.

The person responsible for making qualitative opacity assessments shall be knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting and wind, and the presence of uncombined water in the plume.[1] The permittee shall keep records of each

[1] For basic information about opacity observations, refer to 40 CFR Part 60 Appendix A, Method 9.

qualitative assessment, which shall include the time and date of the assessment, a description of the emission point from which any unusual emissions emanated, the steps taken to correct any abnormal emissions, and the name of the person conducting the assessment.

The KDHE Bureau of Air does not consider a qualitative assessment in which emissions appear to exceed the applicable opacity limits to be a violation or deviation subject to reporting in accordance with Section **XIII. Reporting of Deviations from Permit Terms**. A Method 9 evaluation that shows opacity exceeding the emission limit would be subject to reporting in accordance with Section **XIII. Reporting of Deviations from Permit Terms**.

X. Requirements Which Will Become Applicable During the Permit Term

The owner or operator, in accordance with the provisions of K.A.R. 28-19-511(b)(16)(C)(ii) and K.A.R. 28-19-512(a)(23) shall comply in a timely manner with those applicable requirements that become effective during the permit term.

XI. Permit Shield

Compliance with the conditions of this permit shall be deemed in compliance with the applicable requirements of the Kansas air quality program as of the date of permit issuance. This shield applies only to:

A. Applicable requirements included, and specifically identified in the permit; and

B. Applicable requirements that the DAQ or the KDHE has specifically identified in writing as not being applicable to the emissions unit or stationary sources and the determination or a concise summary thereof is included in the permit.

Nothing in this permit shall alter or affect:

A. The liability of a permittee for any violation of an applicable requirement occurring prior to or at the time of issuance of this permit;

B. U.S. EPA's ability to obtain information under Section 114 of the Clean Air Act; or

C. The provisions of Section 303, Emergency orders, of the Clean Air Act, including the authority of the administrator of the U.S. EPA under that section or the air pollution emergency provisions of the Kansas air quality program regulations, K.A.R. 28-19-55 through 28-19-58; or

D. The applicable requirements of the acid rain program consistent with section 408(a) of the Act.
[K.A.R. 28-19-512(b)]

XII. Testing, Monitoring, Recordkeeping, & Reporting

Testing, monitoring, recordkeeping, and reporting requirements sufficient to assure compliance with the terms and conditions of the permit are required.

In addition to any testing, monitoring, recordkeeping, or reporting requirement contained in Section **VI. Applicable Requirements**, monitoring and reporting may be required under the provisions of K.A.R. 28-19-12, Measurement of Emissions, or as required by any other provision of the federal Clean Air Act.

Records to support all monitoring and copies of all reports required by the permit must be maintained for a period of at least five years from the date of the activity. [K.A.R. 28-19-512(a)(10)(G)]

Summary reports of any routine, continuous, or periodic monitoring must continue to be submitted at six-month intervals for the duration of the permit. The reporting periods and due dates for these reports are identified in Section **XIV. G., Compliance Certification**. All instances of deviations from permit requirements, **including perceived opacity exceedances,** shall be clearly identified in the report. All reports shall be certified by a responsible official. [K.A.R. 28-19-512(a)(11)(A)]

Submission of quarterly or semi-annual reports required by any applicable requirement which duplicate the reporting required in the previous paragraph will satisfy the reporting requirements of the previous paragraph if noted on the submitted report. [K.A.R. 28-19-512(a)(9)]

Records of required monitoring shall include:

A. The date, place, and time of sampling or measurement;

B. The date(s) analyses were performed;

C. The company or entity which performed the analyses;

D. The analytical techniques or methods used;

E. The results of the analyses;

F. The operating conditions that existed at the time of sampling or measurement; and

G. The retention of records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
[K.A.R. 28-19-512(a)(10)]

XIII. Reporting of Deviations from Permit Terms

Unless a different time period is specified in this permit, deviations from the requirements of this permit shall be reported to the DAQ and the KDHE as follows:

A. Deviations which result in emissions exceeding those allowed in this permit shall be reported the next business day following the discovery of the release, with follow-up written notice within five business days following discovery of the release. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken.

B. Deviations which do not result in emissions exceeding those allowed in this permit shall be reported in writing within 10 business days following discovery of the deviation.

Oral notifications shall be made to the air quality representative of the DAQ in Kansas City. Written notifications shall be made via mail or email to the DAQ office (airquality@wycokck.org) with a copy to the KDHE central office (KDHE.BOAcompliance@ks.gov).
[K.A.R. 28-19-512(a)(11)]

XIV. General Provisions

A. K.A.R. 28-19-11, Enforcement Discretion Due to Startup, Shutdown, Malfunctions, or Scheduled Maintenance

An emission source having emissions that are in excess of the applicable limitation and standard specified at K.A.R. 28-19-20, K.A.R. 28-19-30 through 28-19-32, and K.A.R. 28-19-650, and result from startup, shutdown, malfunctions, or scheduled maintenance of control or processing equipment and appurtenances may be exempt from enforcement action at the secretary's discretion if both of the following conditions are met:

1. The person responsible for the operation of the emission source notifies the KDHE of the occurrence and nature of the excess emissions resulting from startup, shutdown, malfunctions, or scheduled maintenance, in writing, within ten (10) days of discovery of the excess emissions.

2. Reasonable action is taken regarding the occurrence specified in paragraph (a)(1) to initiate and complete any necessary repairs and place the equipment back in operation as quickly as possible

Emissions that are in excess of the applicable emission source emission limitations and standard specified at K.A.R. 28-19-20, K.A.R. 28-19-30 through K.A.R. 28-19-32, and K.A.R. 28-19-650, and result from startup, shutdown, or malfunctions shall be evaluated by the secretary for potential enforcement action

based on the frequency and severity of the excess emissions.

Emissions that are in excess of the applicable emission source emission limitation and standard and result from scheduled maintenance of control or processing equipment and appurtenances shall be evaluated by the secretary for potential enforcement action based on the following: (1) the severity of the excess emissions; (2) any prior approval for scheduled maintenance by the secretary; and (3) demonstration that the scheduled maintenance cannot be accomplished by maximum reasonable effort, including off-shift labor where required, during periods of shutdown of any related control or processing equipment.

Any exemption granted under this regulation may be rescinded if the secretary obtains additional information and deems enforcement action necessary based upon this information.

Lack of enforcement for excess emissions under this regulation shall not preclude the taking of enforcement action by USEPA or through private citizen lawsuits.

B. K.A.R. 28-19-752a, Hazardous Air Pollutants; Limitations Applicable to Construction of New Major Sources or Reconstruction of Existing Major Sources

This regulation shall continue in effect for an emissions unit or stationary source until a standard has been promulgated which is applicable to such source pursuant to section 112(d) of the federal Clean Air Act.

This regulation shall apply whenever construction of a new major source or reconstruction of an existing major source of hazardous air pollutants is proposed.

C. Permit Term and Renewal

This permit has a term of five years unless otherwise stated in this permit. A complete application, as defined in K.A.R. 28-19-518, and any applicable fee must be submitted to the KDHE not less than six months and not more than 18 months prior to the expiration date. This operating permit shall not expire on the expiration date if a complete and timely application has been filed with the KDHE. [K.A.R. 28-19-512(a)(8) and K.A.R. 28-19-514]

D. Severability

The provisions of this permit are severable, and if any portion of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstance, and the remainder of this permit, shall not be affected thereby.
[K.A.R. 28-19-512(a)(13)]

E. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.
[K.A.R. 28-19-512(a)(14)(D)]

F. Compliance

The owner or operator shall comply with all conditions of the permit and shall continue to comply with applicable requirements with which the owner or operator is in compliance, in accordance with K.A.R. 28-19-511(b)(16)(C)(i). Any permit noncompliance shall constitute a violation of the Kansas Air Quality Act and shall be grounds for enforcement action, for permit revocation or amendment, or for denial of a permit renewal application. All permit terms and conditions are federally enforceable.

It shall not be a defense for a permittee in an enforcement action to contend that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

This permit may contain provisions which require that data from specific test methods, monitoring, or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Sec. 51.212; 40 CFR Sec.52.12; 40 CFR Sec. 60.11; 40 CFR Sec. 61.12; and incorporation of 40 CFR Sec. 52.33, that allow the use of any credible evidence to establish compliance with applicable requirements. At the issuance of this permit, the State of Kansas has incorporated these provisions in its air quality regulations K.A.R. 28-19-212(c) and (d), K.A.R. 28-19-350, K.A.R. 28-19-720 and K.A.R. 28-19-735.
[K.A.R. 28-19-512(a)(14)]

G. Compliance Certification

The permittee shall annually submit to the Air Compliance and Enforcement Section of the KDHE, and a copy to the Air Permitting and Compliance Branch of the U.S. EPA, Region VII, a certification of compliance (Form CR-02, "Annual Certification").

The due date of the certification will continue to be January 31 of each year for the period from January 1 to December 31 of the previous year.

The semiannual summary reports required by Section **XII. Testing, Monitoring, Recordkeeping and Reporting** shall be submitted by the dates specified below for each subsequent reporting period:

Calendar:

- The report covering the period from July 1 to December 31 shall be submitted by January 31 of each year, and
- The report covering the period from January 1 to June 30 shall be submitted by July 31 of each year.

The certification shall include the permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the method or methods used for determining the compliance, currently and over the reporting period; and such other facts as the KDHE may require to determine the compliance status of the source. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate and complete.
[K.A.R. 28-19-512(a)(26) and K.A.R. 28-19-512(a)(27)]

H. Emergency

An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

An emergency shall constitute an affirmative defense to an action brought for noncompliance with such technology-based emission limitation if the conditions of paragraph (3) below are met. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs or relevant evidence that:

1. An emergency occurred and that the permittee can identify the cause or causes of the emergency;

2. The permitted facility was at the time being properly operated;

3. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in the permit; and

4. The permittee submitted notice of the emergency, containing a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken, to the KDHE within two working days of the time when emission limitations were exceeded due to the emergency.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof.

These emergency provisions are in addition to any emergency or upset provisions contained in any applicable requirement. Whenever these emergency provisions conflict with the provisions of K.A.R. 28-19-11, these emergency provisions shall control.
[K.A.R. 28-19-512(d)]

I. Inspection and Entry

Upon presentation of credentials and other documents as may be required by law, representatives of the KDHE, including authorized contractors of the KDHE, shall be allowed by the permittee to:

1. enter upon the premises where a regulated facility or activity is located or conducted or where records are kept under conditions of this document;

2. have access to and copies of, at reasonable times, any records that must be kept under conditions of this document;

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this document; and

4. as authorized by the Kansas Air Quality Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

[K.A.R. 28-19-512(a)(22)]

J. Permit Amendment, Modification, Reopening, and Changes Not Requiring a Permit Action

The permit may be modified, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

The permitting authority will reopen and revise or revoke this permit as necessary to remedy deficiencies in the following circumstances:

1. Additional requirements under the Clean Air Act become applicable to the source three or more years prior to the expiration date of this permit. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.

2. It is determined by the KDHE determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

3. It is determined by the KDHE that it is necessary to revise or revoke this permit in order to assure compliance with applicable requirements.

This document is subject to periodic review and amending as deemed necessary to fulfill the intent and purpose of the Kansas Air Quality Statutes and the Kansas Air Quality Regulations.

No permit revision shall be required under any approved economic incentives, pollution prevention incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit. [K.A.R. 28-19-513]

K. Duty to Provide Information

Unless a different time frame is specified in this permit, the permittee shall furnish to the KDHE any information that the KDHE may request in writing within 60 days of the request, unless the KDHE specifies another time period. Submittal of confidential business information must be in accordance with the KDHE procedures. [K.A.R. 28-19-518(c) and K.A.R. 28-19-512(a)(14)(E)]

L. Duty to Supplement

The permittee, upon becoming aware that any relevant facts were omitted from or incorrect information was included in any submittal, shall promptly submit such supplementary facts or corrected information. [K.A.R. 28-19-518(e)]

M. Other Permits and Approvals; Applicability

A construction permit or approval must be obtained from the KDHE prior to commencing any construction or modification of equipment or processes which results in potential emission increases equal to or greater than the thresholds specified at K.A.R. 28-19-300.

This document does not relieve the permittee of the obligation to obtain any approvals, permits, licenses, or documents of sanction which may be required by other federal, state, or local government agencies.
[K.A.R. 28-19-512(a)(29)]

N. Submissions

Written notification of malfunctions, exceedances, and deviations may be submitted to the following email address: airquality@wycokck.org and KDHE.BOAcompliance@ks.gov

EPA regulations codified in 40 CFR Part 60, 62, and 63 require affected sources to electronically submit performance test reports, notification reports, and periodic reports to EPA, as specified in the affected regulations. As a result, the EPA has developed the Compliance and Emissions Data Reporting Interface (CEDRI), which is accessed through the EPA's **Central Data Exchange (CDX)** (*https://cdx.epa.gov/*). The CDX Web is the application used by EPA programs and various stakeholders to manage environmental data transmitted to EPA in order to meet EPA's electronic reporting requirements. However, if the reporting form is not available in CEDRI at the time that the report is due, the source must submit the report to the Administrator [address listed in 40 CFR 63.13]:

Kansas Compliance Officer
Air Branch
Enforcement and Compliance Assurance Division
U.S. EPA, Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219

The source must begin submitting required reports via CEDRI no later than 90 days after the form becomes available in CEDRI. Copies of reports submitted through CEDRI, all other reports, notifications, information, and other correspondence (including submission of the Annual Certification Form CR-02) shall be submitted to:

Air Compliance and Enforcement Section
Bureau of Air
Kansas Department of Health and Environment
1000 SW Jackson, Suite 310
Topeka, Kansas 66612-1366
(785) 296-6422

A copy of each Annual Certification Form CR-02 shall be submitted to:

Kansas Compliance Officer
Air Branch
Enforcement and Compliance Assurance Division
U.S. EPA, Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219

The Annual Certification shall be certified by a responsible official. This certification shall state that, based on the information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. This certification shall be submitted with original signatures.
[K.A.R. 28-19-512(a)(21) and K.A.R. 28-19-512(a)(27)]

When specified in the permit, contact the DAQ office at:

Unified Government Public Health Department
Division of Air Quality
619 Ann Avenue
Kansas City, Kansas 66101
(913) 573-6700
airquality@wycokck.org

Authorizing Signature

Permit Writer

_____ _____

Jaclyn Brown
Environmental Scientist
Division of Air Quality

Date Signed

c: KDHE, Bureau of Air
Division of Air Quality, Rollin Sachs, Director

O-13202 (OP100392 v3.0)

Attachment A

LIST OF ACRONYMS and SYMBOLS

ACRONYM or SYMBOL	DESCRIPTION
2SLB	2-stroke lean burn
4SLB	4-stroke lean burn
4SRB	4-stroke rich burn
µm	micrometer (or micron, 10^{-6} meter)
acfm	actual cubic feet per minute
ANSI	American National Standards Institute
AP-42	compilation of air pollutant emission factors (U.S. EPA)
AQI	Air Quality Index
ASTM	American Society for Testing and Materials (now ASTM International)
BACT	best available control technology
BOA	KDHE Bureau of Air
Btu	British thermal unit
CAA	Clean Air Act (1970)
CAAA	Clean Air Act Amendments (1990)
CAS	Chemical Abstracts Service
CBSA	Core-Based Statistical Area
CD	compliance demonstration (form)
CDE	control device efficiency
CE	capture efficiency
CEM	continuous emission monitor(ing)
CEMS	continuous emission monitoring system
CFC	chlorofluorocarbon
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CISWI	commercial/industrial solid waste incinerator
CMS	continuous monitoring system
CO	carbon monoxide
COM	continuous opacity monitor(ing)
COMS	continuous opacity monitoring system
CPM	continuous parameter monitor(ing)
CPMS	continuous parameter monitoring system
CR	certification (form)
CSAPR	Cross-State Air Pollution Rule
CTG	Control Techniques Guideline (U.S. EPA)
DDGS	distillers dry grain solubles
dscf	dry standard cubic foot
dscm	dry standard cubic meter
DSI	dry sorbent injection
E10	10% ethanol blend (10% ethanol, 90% gasoline by volume)

ACRONYM or SYMBOL	DESCRIPTION
EF	emission factor
EG	emission guideline
EGU	electric generating unit
EI	emissions inventory
EM	emission calculations (form)
EPA	Environmental Protection Agency (or U.S. EPA)
EU	emission unit
FE	fugitive emission
FESOP	federally enforceable state operating permit
FGD	flue gas desulfurization
FGR	flue gas recirculation
FIP	federal implementation plan
g	gram
GDF	gasoline dispensing facility
GDV	gasoline delivery vessel
GEP	good engineering practice
GI	general information (form)
GOP	General Operating Permit
gph	gallons per hour
gpm	gallons per minute
gr	grain (1/7000 lb avoirdupois)
HAP	hazardous air pollutant
HC	hydrocarbon
HCFC	hydrochlorofluorocarbon
HMIWI	hospital/medical/infectious waste incinerator
HON	hazardous organic NESHAP
hp	horsepower
IA	insignificant activity
ICE	internal combustion engine
JCDHE	Johnson County Department of Health and Environment
K.A.R.	Kansas Administrative Regulation
KDHE	Kansas Department of Health and Environment
K.S.A.	Kansas Statutes Annotated
kW	kilowatt
LAER	lowest achievable emission rate
LFGE	landfill gas-to-energy
LNB	low NO_x burner
MACT	maximum achievable control technology
MATS	Mercury and Air Toxics Standards (rule)
MBtu	thousand Btu
ME	monitoring equipment (form)
Mg	megagram (10^6 grams, 1 metric ton, 1 tonne)
MMBtu	million Btu
MOD	modification (form)

ACRONYM or SYMBOL	DESCRIPTION
MON	miscellaneous organic NESHAP
MSDS	material safety data sheet
MSW	municipal solid waste
MWC	municipal waste combustor
MWI	medical waste incinerator
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NCDO	North Central District Office (KDHE)
NEDO	Northeast District Office (KDHE)
NESHAP	national emission standard(s) for hazardous air pollutants
NMOC	non-methane organic compound
NO_X, NOX	nitrogen oxides
NSPS	new source performance standard
NSR	new source review
NWDO	Northwest District Office (KDHE)
OAQPS	Office of Air Quality Planning and Standards (U.S. EPA)
OM&M	operation, maintenance, and monitoring
OSHA	Occupational Safety and Health Administration (U.S. Dept. of Labor)
P2	pollution prevention
PAL	plant-wide applicability limitation
PCB	polychlorinated biphenyl
PCD	pollution control device
PM	particulate matter
PM_{10}, PM10	PM with an aerodynamic diameter of less than or equal to 10 µm
$PM_{2.5}$, PM2.5	PM with an aerodynamic diameter of less than or equal to 2.5 µm
PMD	portable monitoring device
ppmv	parts per million, volumetric basis
ppmw	parts per million, weight basis
PSD	prevention of significant deterioration
psia	pounds per square inch, absolute
psig	pounds per square inch, gauge or gage
PTE	potential to emit, potential-to-emit
QA/QC	quality assurance / quality control
RACM	reasonably available control measure(s)
RACT	reasonable available control technology
RATA	relative accuracy test audit
RICE	reciprocating internal combustion engine
RMP	risk management plan
RTO	regenerative thermal oxidizer
RVP	Reid vapor pressure (psia at 100 °F)
SBEAP	(Kansas) Small Business Environmental Assistance Program
SCDO	South Central District Office (KDHE)
scfm	standard cubic feet per minute

ACRONYM or SYMBOL	DESCRIPTION
SCR	selective catalytic reduction
SEDO	Southeast District Office (KDHE)
SEP	supplemental environmental project
SIC	Standard Industrial Classification (code)
SIP	state implementation plan
SLEIS	State and Local Emissions Inventory System (emissions inventory database)
SNCR	selective non-catalytic reduction
SOCMI	synthetic organic chemical manufacturing industry
SO_X, SOX	sulfur oxides (typically measured as sulfur dioxide, SO_2)
SPP	Southwest Power Pool (electric grid operator for Kansas)
SWDO	Southwest District Office (KDHE)
TCO	thermal catalytic oxidizer
TDF	tire-derived fuel
THC	total hydrocarbons
TO	thermal oxidizer
TOC	total organic carbon; total organic compounds
TOG	total organic gases
tph	tons per hour
tpy	tons per year
TR	Transport Rule
TRS	total reduced sulfur
TSP	total suspended particulate(s)
ULSD	ultra low sulfur diesel
U.S. EPA, USEPA	United States Environmental Protection Agency
USC	United States Code
VOC	volatile organic compound
VOL	volatile organic liquid
VRU	vapor recovery unit
WDEH	Wichita Department of Environmental Health
WDF	waste-derived fuel
WDGS	wet distiller's grains with solubles
WTE	waste to energy
WYCO-KCK	Unified Government of Wyandotte County and Kansas City, Kansas Health Department

Attachment B

Site Diagram